

M.Sc. (Part-I) (Microbiology) (CBCS Pattern) Sem II
PSCMBT-107 / PSMBT-107 - Paper-III
Microbial Methods for Environmental Management (MMEM)

P. Pages : 1

Time : Three Hours



GUG/S/18/20167

Max. Marks : 80

Notes : 1. All questions are compulsory and carry equal marks.

1. Discuss the microbial changes induced by organic and inorganic pollutants. **16**

OR

Write short notes on.

- a) Biomagnification of chlorinated hydrocarbons.
- b) Biodeterioration of pharmaceutical products.

2. Discuss role of micro-organisms in bioleaching of ores. Also discuss different leaching techniques. **16**

OR

Write note on

- a) Biodegradation of plastic
- b) Mercury transformation.

3. Discuss in detail concept of phytoremediation and applications. **16**

OR

Give waste water management using.

- a) Activated sludge.
- b) Rotary biological contractors.

4. Discuss the impact of green house effect and biotechnological approaches for management. **16**

OR

Write short note on

- a) Acid rain.
- b) Acid mine drainage.

5. Write short note on **16**

- a) Factors influencing eutrophication process.
- b) Biotransformation of hexachlorobenzene.
- c) Fluidized bed reactors.
- d) Global warming and climate change.
